MILK RIVER WATERSHED NEWS

Summer 2001
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Low Water Supply Spurs Improved Management

By R. Scott Guenthner, U.S. Bureau of Reclamation

The water supply during 2001 has not been good in the Milk River Basin, with the exception of the Glasgow area, which experienced above average rainfall again this summer. Water users remember and often recall other dry years in the recent past; years like 1977, 1985, and 1988. Water year 2001 will now be included in that group. Irrigators, the recreation public, and municipalities all experienced adverse impacts this year.

Even the water users of the Fort Belknap Indian Irrigation Project, with the most senior water rights in the basin, felt the impacts of below normal water supply. Besides receiving less water, irrigators within the Fort Belknap Indian Irrigation Project had to change their normal irrigation practices. They are entitled to receive water from both direct flow water rights and from storage in Fresno Reservoir. This year, the Fort Belknap Indian Irrigation Project canal began diverting water on March 22. The canal was started much earlier than normal at the encouragement of Project water users. They realized that natural direct flow of the river, of which they are entitled, might not be available if they waited. The operating plan of the Project was to divert only the natural flow of the river originating downstream of Fresno Dam for the first irrigation, and store the natural flow originating upstream of Fresno Dam in Fresno Reservoir. Under this plan, the Project only received credit for one-seventh of the natural flow stored in Fresno Reservoir, but would allow for a second irrigation later in the year. The Reclamation Milk River Project water users were credited with six-sevenths of the natural flow that was stored in Fresno Reservoir. At one point during the season, the Ft. Belknap Indian Irrigation Project canal diversion was reduced at the request of downstream irrigators to allow water to flow down the river. The Project canal was shut down on June 9. The Fort Belknap Indian Irrigation Project had stored water left in Fresno Reservoir at the end of July

INSIDE

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Reclamation Begins Canal Efficency Study

By Lenny Duberstein, Bureau of Reclamation

Rain fell and mud flew the first week in June as the Milk River Canal Efficiency study got off to a slippery start. Three hydrologic technicians, Chuck Hewitt, Deb Pankratz, and Elizabeth Fisher had just been hired by the Milk River Joint Board of Control (JBC) and were being trained, in the rain, on the techniques of water measurement. Chuck, Deb and Elizabeth will be working in the Chinook, Malta and Glasgow areas respectively.

Deb Pankratz, Elizabeth Fisher and Chuck Hewitt, learn how the Hydromet system works, from Fresno Dam Operator Brad Bender.

Late last winter the JBC and the U. S. Bureau of Reclamation (Reclamation) discussed the need to take a closer look at water use along the river. Although the state and Reclamation have performed many studies of the Milk River over the years, very little reliable data exists that provides an understanding of where water in the basin is going, how it is being used, and how the system could be managed better. This joint effort between the JBC and Reclamation not only provides important information in a low water years like this, but helps guide pivotal decisions affecting the future of the basin, which may be coming shortly.

This spring the Montana Legislature and the Governor approved the Fort Belknap Compact to settle the reserved water rights of the Gros Ventre and Assiniboine Tribes. Water on the Milk River is already in short supply. Providing additional water to the Reservation while meeting the needs of existing non-tribal users will likely require improvements to the Milk River Project and canal systems. While the compact mentions several potential "mitigation" measures (e.g. water conservation, improved river operation and use of storage facilities, water-banking etc.), specific measures have yet to be determined. Reclamation will examine these and other measures as part of the ongoing North Central Montana Regional Feasibility Study. Accurate information on the operations and water budgets of the canal systems is needed to identify which improvements will be the most economical, while best meeting basin needs.

The Canal Efficiency Study is intended to go for

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according to Bureau of Reclamation accounting. This water will be used during a brief period in August.

One of the significant developments in the basin this year was the appointment of a water commissioner for the Milk River. District Judge John C. McKeon of the 17th Judicial District appointed a water commissioner upon a petition filed by the Glasgow Irrigation District. The water commissioner began measuring and distributing stored water released from Fresno and Nelson Reservoirs. The water commissioner was also asked to measure and distribute stored water along the Milk River mainstem between Nelson Reservoir and Vandalia Diversion Dam. Rainfall in the Glasgow Irrigation District service area has so far made it unnecessary for the water commissioner to measure and distribute stored water. Streamflows and weather conditions during August will determine if the water commissioner will have to take action. The importance of this action may not provide significant improvements of the water supply this year. However, knowing that it is possible to have a water commissioner appointed without the presence of a final water right decree could lead to the routine appointment of a water commissioner for the entire length of the Milk River below Fresno Reservoir.

Water short years such as the present year are extremely frustrating for water users who feel the direct impacts of a reduced water supply. However, lessons learned this year like changes in timing of water use, improved cooperation among water users, and appointment of a water commissioner could lead to improved water use and water distribution in future years.

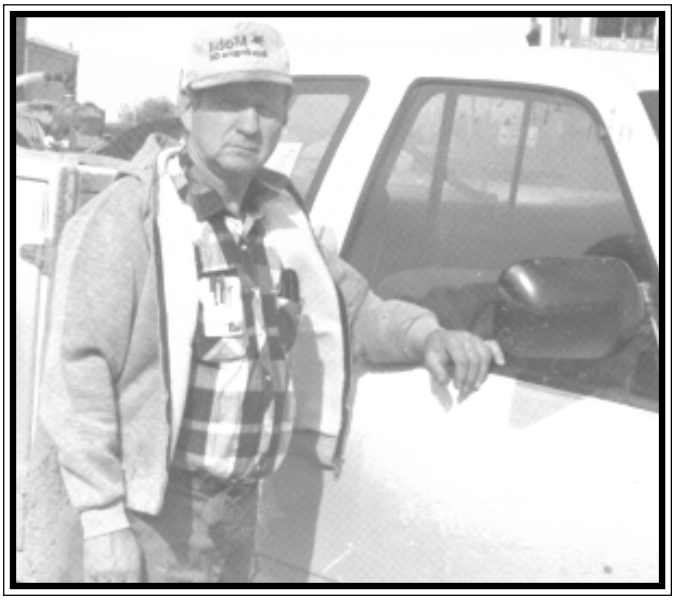
OPINION

A Tough Year with a Few Bright Spots

By Kay Blatter

TOUGH YEAR

By the time this article hits the press, irrigation water will have been shut off and the Milk River will become a very low and dry stream until next spring. A lot has happened but not much water under the bridge. From what I've been able to determine from visiting with folks around the area, it certainly hasn't been a banner year for income from agriculture. However the water supply situation turned out slightly better than it appeared last spring. Hopefully we'll get some good fall rain, and lots of snow on the prairie and in the mountains this winter.



Kay Blatter

Mother Nature has dealt us a tough water year, but farmers in the Klamath Falls, Oregon area are in really tough shape. Having endangered species in our project area, irrigators on the Milk River Project are watching this situation closely. The two questions that come to mind are what can we learn from Klamath Falls, and how can we avoid a similar fate? It disturbs me, and I don't have the answers, but what is clear, is water short years and situations like this, highlight the competition for limited resources. It also underscores the importance of finding middle ground to resource problems before they reach a flash point.

CANADIAN TOUR

On June 18 and 19th, some of us had a very enjoyable tour of Canadian irrigation projects on the eastern tributaries, and headwaters of Battle Creek and the Frenchman River sponsored by the Milk River International Alliance. It was very interesting and informative. I extend a very big "thank you" to everyone that helped make it happen. My deep appreciation goes out to Rob Weibe of Sask Water, and Marv Cross from the Department of Natural Resources and Conservation (DNRC) for organizing the tour, and the Valley County Conservation District for administering a DNRC Irrigation Development Grant to cover attendee expenses. Regrettably, funding restraints limited the number of American attendees to 14, but it was money well spent.

SAINT MARY UPDATE

Contracts have been let and work should start soon on rehabilitation of the Saint Mary siphon tubes. Funding for the project came from a DNRC Renewable Resource Grant obtained by the Joint Board of Control, and water user assessment dollars. Sherburne Lake will be low enough by mid-August, to allow crews to begin working on Sherburne Dam.

All we need to do is spend the rest of the winter praying for heavy snowpack in the mountains to fill her back up.

MRIA RECEIVES FUNDING

The MRIA 319 grant was finally approved. The Advisory Council and Technical Advisory Group met, and will be meeting again soon, to chart the way for the MRIA and to hire a coordinator. A general meeting was also held on August 15 from 10:00 a.m. to 3:00 p.m. at the First State Bank Community Room in Malta. As always, all MRIA meetings are open to everyone, and please bring your thoughts and ideas!

Irrigators Tour Saskatchewan Projects

By Rob Wiebe, Sask Water

Tour members gather at demonstration site on the Canadian Irrigation Tour.

On June 18 and 19, 2001, more than twenty irrigators from Montana and Saskatchewan toured irrigation reservoir storage, and irrigation projects along the Eastern Tributaries of the Milk River Basin in Saskatchewan. Fourteen Montana irrigators from the Milk River Basin and two DNRC representatives gathered in Chinook and Havre to travel to Consul, Saskatchewan to begin the tour. Eight local Saskatchewan irrigators and representatives from Sask Water and Prairie Farm Rehabilitation Administration (PFRA) joined them. Following lunch, Sask Water and PFRA presented an overview of the tour, the projects, and the monitoring systems used to comply with the Boundary Waters Treaty of 1909.

The tour included stops at the Vidora (2600 acres) and Consul (3000 acres) irrigation projects located in the Battle Creek watershed. Participants were introduced to the unique Cypress Lake, which is able to capture, as well as release, water from both Frenchman and Battle Creek drainages. This year, low water levels on this reservoir required water destined for Battle Creek projects to be pumped by two large diesel powered axial flow pumps. Following dinner at the picturesque Spring Valley Guest Ranch near Ravenscrag, the day ended with the group attending an irrigation demonstration sponsored by the Irrigation Crop Diversification Corporation. The group spent the night at the rustic cabins located in the Cypress Hills Interprovincial Park, the headwaters for the Frenchman River.

The second day began with PFRA providing a historical overview of the development of water supply works in the Milk River, Saskatchewan area. Later, the focus was on Frenchman River projects beginning at the Eastend (2900 acres) project, including the Eastend Reservoir, a crop demonstration site, and an explanation of the area geology. The Val Marie (7,000 acres) project and reservoirs rounded out the day and concluded the tour. Effective water management begins with understanding the physical characteristics of the supply systems and cultural aspects of those who use the water. By all accounts the tour can be considered a success. American and Canadian irrigators were introduced to, and became more familiar with, the physical irrigation works. More importantly irrigators and water managers, from both sides of the border had an opportunity to better understand and discuss each other's needs for water.

Cypress Lake controls realeases ot the Frenchman River and Battle Creek.

Tour members at demonstration site.

Eastend Dam near Eastend, Saskatchewan on the Frenchman River.

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two years. The first year we would learn how the canal systems operate, determine an initial water budget for each district, and identify likely system improvements. The second year would be used to confirm information collected the first year, and collect additional information for specific system improvements. The door was left open to continue into a third year if needed.

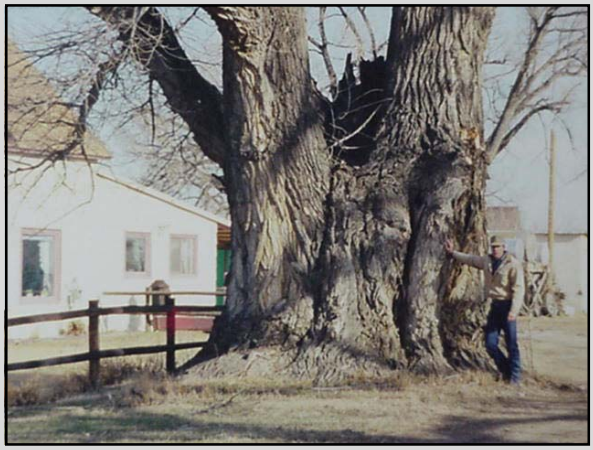
It was shaping up to be one of the driest years on record, compounded by almost no carry-over water in Fresno, Nelson, and Sherburne Reservoirs because of dry conditions last year. From the start, we knew that collecting canal efficiency data this year was going to be tough. Milk River Project water allocations were originally set at 0.6 of a foot per acre in May, and then cut to just 0.4 of a foot per acre in June. The conditions couldn't be much worse for examining "typical" operations of the canal systems. On the bright side, water users were paying attention, realizing the importance of good water measurement for efficient canal operation and equitable distribution of water.

The short water supply and irrigation season provided a backhanded benefit, giving us an opportunity to get ready for next year. Many of the canals and laterals in the valley are too flat to use traditional water measurement devices, which makes accurate water measurement difficult and unreliable. Several steps have been taken that provide a means of collecting data for the study, as well as providing management tools for the ditch riders. New electronic water measurement gages will be installed to more accurately measure water diversions by individual canals. Staff gages are being placed at the head of most laterals, which allows existing gates to be used for water measurement and accounting on each lateral. Canal and lateral spillways will be monitored to measure operational spills. Data loggers will be placed on some of the laterals to record water flows where possible. By measuring and tracking water flow, we hope to develop an accurate water budget for each district.

In many ways a water budget is similar to a household budget. For a household budget you track how much money you made, then try to figure out where it all went. Well, a water budget is quite similar. You need to know: how much water each canal diverted from the river; how that water is divided up into laterals or smaller canals; how much is being delivered to farmers; how much is spilled; and how much is lost to seepage and evaporation. A water budget is important for determining what types of improvements will be most effective and economical.

One factor that became obvious this short water year was that there was a large amount of water released from Fresno Dam, that could not be accounted for. The Canal Efficiency Study will examine river transportation losses and determine how river operations can be improved.

I can guess what you're all thinking: "What's going to make this study any different from all those other Milk River studies?" Well, I give no guarantees, but from the start we have had the cooperation of all the irrigation districts, the Milk River Joint Board of Control, the Department of Natural Resources and Conservation, the Fort Belknap Indian Reservation, and Reclamation. It is our hope that with everyone's support and working together, we can define real solutions for improving the use of our limited water supplies identified in the study.



Cottonwoods thrive along the Milk River, such as this one near Chinook, which measures roughly 31 feet in circumference.

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Blaine County and MRIA Begin Watershed Assesment Project

By Paul Azevedo, DNRC

On July 2, 2001, the Blaine County CD and MRIA received "notice to proceed" from the Department of Environmental Quality (DEQ) with work on the Milk River Watershed Assessment Project (Project). The goals of the Project include:
1) Complete a natural resource assessment to provide baseline data to be used as a foundation for future watershed planning efforts;
2) Implement irrigation water management practices to improve natural resource conditions in the basin;
3) Provide information and education for Milk River Basin residents.

Primary funding for the Project will come from a $74,000 "319-grant" that the MRIA applied for last fall. The Project will take about two years to complete.

The MRIA will also be receiving additional funding assistance from Montana Department of Natural Resources and Conservation (DNRC). DNRC has entered into agreements with the U.S. EPA, BLM, and Reclamation to pass approximately $44,000 on to the basin. These funds are intended to assist with compiling baseline data, support the development of information and education programs, assist with general watershed projects that address water resources, and provide administrative support for the MRIA.

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